10. CHESAPEAKE BAY, JAMES RIVER

(1) This chapter describes the James River and several of its tributaries of which the Nansemond, Chickahominy, and Appomattox Rivers are the more important. Also discussed are the ports of Richmond and Hopewell, as well as several of the minor ports and landings on these waterways.

(2) **COLREGS Demarcation Lines.**–The lines established for Chesapeake Bay are described in **80.510,** chapter 2.

(3) **Charts 12248, 12251.–James River** rises in the Allegheny Mountains near Clifton Forge, Va., and flows 295 miles southeastward to Hampton Roads at Newport News, 21.5 miles by main channel from the Virginia Capes. The head of commercial navigation is at Richmond, 78 miles above the mouth. The river varies in width from 1,000 feet at Richmond to 4.3 miles at the mouth. Traffic consists chiefly of general cargo, chemicals, livestock, tobacco, and paper products. Drafts of vessels using the river above Newport News generally do not exceed 15 feet, but vessels drawing 24 feet or more navigate it occasionally.

(4) **Mileages** shown in this chapter as Mile 0.9N, Mile 12W, etc., are the nautical miles above the mouth of James River; the letters N, S, E, and W denote by compass points the side of the river where each feature is located. Mile 0.0 is a point in the main channel on a line between Pig Point and Newport News Point; the midchannel point is 21.5 miles from the Virginia Capes.

(5) It is to be understood that the mileages given are approximations. The values are not intended to be finite. The intended degree of accuracy is only supposed to be enough to put the user of the chart into the general vicinity of the cited object, for the purpose of him locating the object.

(6) **Channels.–**The Federal project for James River provides for dredging depths of 25 feet to the Richmond Deepwater Terminal and in the Richmond Deepwater Terminal Turning Basin, 74 miles above the mouth, thence 18 feet to and in the Richmond Harbor Turning Basin, 77 miles above the mouth, and thence 18 feet to the Richmond Lock at Richmond, 78 miles above the mouth. The river is well marked. (See Notice to Mariners and latest editions of the charts for controlling depths.)

(7) **Anchorages.**–General anchorages extend for about 7 miles above the mouth. (See **110.1 and 110.168 (b) and (h),** chapter 2, for limits and regulations.)

(8) **Dangers.–**Numerous stakes, piling, wrecks, and other obstructions are on both sides of the main channel in James River.

(9) **Tides.–**The mean range of tide is 2.6 feet at Newport News and Hopewell, and 3.2 feet at Richmond.

(10) **Currents.–**The currents in James River follow the general direction of the channel, except between Hog Island and Jamestown Island, 25 miles above the mouth, where they set across Goose Hill Flats. In the lower reaches, the velocity of flood is about equal to that of ebb. Near Richmond, the drainage flow predominates and the current seldom, if ever, sets upstream. These normal conditions are subject to change by wind and freshets.

(11) During severe winters some drift **ice** appears, and at times the river freezes over, but navigation to Richmond hardly ever is suspended because the ice is broken up by a tug.

(12) **Freshets** occur irregularly in the fall, winter, and spring; their height at Richmond ranges from 6 to 32 feet, though the latter is exceptional. The maximum freshet heights usually occur between the middle of March and the middle of April; the freshets occurring at other times usually reach heights not greater than about 6 feet above the normal high water. The number of freshets that cause the water to rise above the level of the wharves along the main channel at Richmond averages about one per year; the water seldom rises above the level of the city wharf. The flood heights diminish rapidly below Richmond; the extreme is about 11 feet less at Dutch Gap, and the rise is not felt at Hopewell. The cutoffs have reduced the freshet height at Richmond about 1 foot.

(13) **Pilotage, James River**.–Pilotage on the James River is compulsory for all foreign vessels and for U.S. vessels under register in the foreign trade. Pilotage is optional for U.S. vessels in the coastwise trade which have on board a pilot licensed by the Federal Government to operate in these waters.

(14) The Chesapeake and Interstate Pilots Association offers pilot services to vessels engaged in the coastwise trade and public vessels to any port or place on the James River. Chesapeake and Interstate Pilots Association offers some pilot service in the upper James River at night. Arrangements for pilots may be made through ships' agents or the pilot office in Norfolk (telephone, 757-855-2733). Vessels requesting a river pilot only are usually boarded off Newport News Point. Pilots from sea are boarded at Cape Henry. Pilots use commercial launch services. Pilots begin radio watches at the launch service on VHF-FM channel 16 30 minutes prior to last ETA. Advance pilot orders requested with 3-hour ETA update and any subsequent changes requested. The pilot office can also be contacted through the Maritel Marine Operator.

(15) The Virginia Pilots Association offers pilotage to all vessels. Pilot service for the upper 38 miles of the river is available only during daylight. (See Pilotage, chapters 3 and 9.)

(16) The principal places for **supplies** above Newport News are Hopewell and Richmond. **Repair** facilities are limited; small marine railways operate in Chuckatuck Creek, Pagan River, Appomattox River, and at Falling Creek.

(17) **Chart 12248.–**The entrance to James River is between Pig Point (36°54.3'N., 76°26.5'W.) and **Newport News Point,** 3.6 miles to the north-northeastward; the midchannel point is 21.5 miles from the Virginia Capes and is close to the Newport News Wharves, described in chapter 9.

(18) A **bridge-tunnel complex** (Interstate Route 664) crosses Hampton Roads and connects Newport News with Suffolk. The fixed bridge crosses a small boat channel in the south section of the complex and has a clearance of 30 feet.

(19) **Nansemond River** empties into the mouth of James River between Pig Point and **Barrel Point,** 2 miles to the west-northwest. Traffic on Nansemond River consists chiefly of pleasure craft. The river is used considerably by vessels with drafts of 9 feet and has been navigated with drafts of as much as 11 feet.

(20) A narrow channel leads to Suffolk, 15 miles above the mouth of Nansemond River. In November 2000, the reported centerline controlling depth was 9.8 feet to Daybeacon 26; thence in 1978, 8 feet was reported to Suffolk. The channel is well marked to Western Branch, 10 miles above the mouth. Local knowledge is necessary to navigate the narrow unmarked channel above Western Branch. A dam is 0.5 mile above the bridge in Suffolk.

(21) The mean range of tide in Nansemond River is about 2.8 feet at the entrance and 3.8 feet at Suffolk. The current velocity is about 0.9 knot and follows the general direction of the channel.

(22) **Pig Point,** on the south side of the entrance to James River and the east side of the entrance to Nansemond River, is the site of a community college and a manufacturing plant. In 1982, an unmarked channel leading to a pier at Pig Point had a reported controlling depth of 2 feet; in November 1984, the channel was not maintained. The twin tanks 0.4 mile east of the pier are prominent. The submerged pilings of an old pier extend northward 0.7 mile from the vicinity of the tanks and are marked at the outer end by a daybeacon.

(23) About 2.2 miles southwestward of Pig Point, a narrow, dredged channel marked by a seasonal light and daybeacons leads southward from Nansemond River channel into **Bennett Creek.** In August 1998, the controlling depth was 5½ feet in the entrance channel to the mouth of the creek. The creek has deeper water inside to the fixed highway bridge, which has a clearance of 20 feet. Gasoline is available at a small-boat basin just below the bridge.

(24) From Pig Point to Hollidays Point, 6.5 miles upstream, Nansemond River is wide, but the channel is crooked and leads between extensive shoals that are almost bare at low water in some places. There are many fish stakes on the shoals near the mouth. Above Hollidays Point, the river is narrow and crooked, but the midchannel is clear to Suffolk.

(25) The highway bridge over Nansemond River at **Town Point,** on the south side 2.4 miles above the mouth, has a fixed span with a clearance of 65 feet. An overhead power cable with a clearance of 96 feet over the main channel crosses the river about 0.8 mile above the bridge.

(26) **Great Shoal,** on the northwest side of the channel 1 mile up Nansemond River from the bridge, has an oyster bar that bares ½ foot at low water; it is marked by bush stakes.

(27) The highway bridge over the river at **Hollidays Point,** on the north side 6.5 miles above the mouth, has a swing span with a clearance of 7 feet. (See **117.1 through 117.49,** chapter 2, for drawbridge regulations.) An overhead power cable with a clearance of 40 feet crosses the river about 2.5 miles above the bridge.

(28) **Western Branch** empties into the west side of Nansemond River, about 10 miles above the mouth. In June 1994, the controlling depth was 5 feet in the north half and 6 feet in the south half of the dredged channel for about 0.7 mile above the mouth, thence in 1997, a midchannel controlling depth of 2½ feet was available to 0.8 mile above the branch entrance, thence in 1974-1977, a midchannel controlling depth of 2 feet was available to the fixed highway bridge at **Reids Ferry,** 1.6 miles above the mouth. The channel entrance is marked by daybeacons for about 700 feet above the junction with the Nansemond River. A seasonal marina, 0.7 mile from the main Nansemond channel, has a pier with a depth of about 10 feet at the face. Gasoline, diesel fuel, a 45–foot marine railway, and a 4-ton lift are available. Minor repairs can be made. In 1967, a submerged obstruction was reported near the mouth of Western Branch in 36°47'20"N., 76°33'47"W.

(29) A fixed highway bridge with a clearance of 35 feet crosses the Nansemond River, about 12.5 miles above its mouth.

(30) **Suffolk** is an important rail center on the south side of Nansemond River, 15 miles above the mouth. The highway bridge at Suffolk has a 45-foot fixed span and a clearance of 3½ feet. The overhead power and telephone cables at the bridge have a clearance of 40 feet.

(31) **Batten Bay,** on the west side of James River just north of Nansemond River, has general depths of 2 to 6 feet. **Ragged Island Creek,** at the north side of the bay, is shallow and little used.

(32) **Chuckatuck Creek,** which empties into Batten Bay from southwestward, has depths of about 4 feet in the approach through the bay and deeper water inside for about 1.7 miles. The channel over the bar and through the bay is marked by lights, buoys, and daybeacons; the channel edges usually are marked by bush stakes.

(33) The highway bridge over Chuckatuck Creek, 0.8 mile above the mouth, has a fixed span with a clearance of 35 feet. A small shipyard is at **Crittenden,** on the south side of the creek just eastward of the bridge; berths, gasoline, diesel fuel, ice, and some marine supplies are available. All types of repairs can be made; a marine railway there can handle craft up to 75 feet long.

(34) **James River Bridge,** Mile 4, extends 4 miles from shore to shore in a northeast-southwest direction. The main channel vertical-lift span, 1 mile from the northeast shore, has a clearance of 60 feet down and 145 feet up. The bridgetender monitors VHF-FM channel 13; call sign KQ-7169. (See **117.1 through 117.49,** chapter 2, for drawbridge regulations.) A fixed span midway between the two shores has a clearance of 25 feet. The overhead power cable crossing the river close northward of the bridge has a clearance of 172 feet at the lift span and 100 feet at the fixed span. Both of the piers that protect the two cable suspension towers just north of the lift span are marked by three fixed red lights.

(35) **Mariners' Museum,** Mile 6E, is at the western side of **Lake Maury.**

(36) **White Shoal,** on the southwest side of the main channel at Mile 7, is marked near its southeast end by the tower of an abandoned lighthouse. A secondary channel on the opposite side of the shoal also is marked.

(37) **Pagan River** empties into James River at Mile 7W. Traffic on this river consists chiefly of shellfish, sand, and gravel. In July 1999, the controlling depths were 7 feet from the entrance to Daybeacon 15, thence 3 feet (4 feet at midchannel) to Smithfield.

(38) The approach to Pagan River through the dredged channel southeast of White Shoal is well marked; the river inside is also marked to within 1 mile of Smithfield. The mean range of tide is 2.8 feet at the entrance.

(39) **Jones Creek,** on the south side of Pagan River 0.7 mile above the mouth and marked by a light and a daybeacon at the entrance. In March 1998, the controlling depth was 5½ feet (6 feet at midchannel) to the fixed highway bridge, 0.6 mile above the mouth, which has a width of 30 feet and a clearance of 8 feet. An overhead power cable close southward of the bridge has a clearance of 32 feet. A marina and fish pier are at **Rescue,** just below the bridge; some supplies, fuel, and a 30-ton mobile hoist are available; repairs can be made. A 45-foot marine railway is 100 yards above the bridge. The fixed highway bridge, 2.5 miles above the mouth, has a width of 40 feet and a clearance of 7 feet.

(40) **Battery Park** is on the south side of Pagan River 1 mile above the mouth. Hull and engine repairs can be made at the town, in a boatyard 150 yards above the oyster plant.

(41) **Cypress Creek,** on the south side of Pagan River 4 miles above the mouth, has depths of 4 feet or more for 2 miles. The fixed highway bridge over the entrance has a clearance of 12 feet. An overhead power cable with a clearance of 36 feet crosses the creek about 0.8 mile above the bridge. A fixed highway bridge,

with a clearance of 16 feet for a width of 46 feet, crosses the river about 1.1 miles above the mouth.

(42) **Smithfield,** on the southwest side of Pagan River 4.5 miles above the mouth, is famous for its hams. The fixed highway bridge just above the town has a width of 30 feet and a clearance of 15 feet. An overhead power cable at the bridge and one 0.4 mile west of the bridge have clearances of 30 feet. A fixed highway bridge, with a clearance of 16 feet for a width of 48 feet, crosses the river about 0.6 mile above the fixed highway at Smithfield.

(43) **Deep Creek,** Mile 8E, is used as an overnight anchorage by many oyster boats. A dredged marked channel leads from James River to a turning basin opposite Menchville. In December 1998, the controlling depths were 5 feet (7½ feet at midchannel) from the channel entrance to the turning basin with 7½ feet in the basin. Traffic consists of some shellfish, sand, and gravel.

(44) **Menchville** is on the northwest side of the entrance to Deep Creek. The landings at the town have depths of about 5 feet alongside; gasoline and diesel fuel are available. Numerous pleasure craft use Deep Creek during the summer. Gasoline, supplies, and a 12-ton lift are available on the east side about 0.5 mile above the mouth.

(45) **Warwick River,** marked by daybeacons to a point about 3 miles above the mouth, is entered just north of Deep Creek; depths of 4 feet or more can be carried to **Fort Eustis,** 7 miles above the mouth. The mouth of the river is sometimes used as an anchorage by small oyster boats.

(46) **Point of Shoals,** Mile 12W, is an extensive shallow area in **Burwell Bay.** There are also wide areas of unmarked shoals between the channel and the northeastern shore. The main channel formerly circled around Point of Shoals, but is now through the dredged cut known as **Rocklanding Shoal Channel.** The old channel has shoaled, but is still buoyed; the current velocity is 0.9 knot. The several small landings along the shore of Burwell Bay have depths of about 4 feet at their outer ends.

(47) Burwell Bay is used as an anchorage for a **Maritime Administration Reserve Fleet**. (See **162.270,** chapter 2, for regulations **restricting navigation** in the vicinity of the decommissioned ships.)

(48) A small-craft harbor of refuge is on the west side of Burwell Bay at **Tylers Beach** (37°04.9'N., 76°40.0'W.). A dredged channel, marked by lights and daybeacons, leads from James River to the harbor basin. In July 1995, the controlling depths were 3 feet in the entrance channel and 4½ feet in the basin. Limited float space is available in the basin.

(49) At Mile 16.2E, a dredged channel, marked by a **075°** lighted range, lights, daybeacons, and a buoy, leads from James River to a boat basin of the U.S. Maritime Administration reservation at **Fort Eustis.** In July 1992, the controlling depths were 3 feet (10 feet on centerline) to the basin with 3 to 9 feet in the basin. The ruins of an army pier are visible close northward of the channel. Decommissioned ships are moored on either side of the channel.

(50) **Deep Water Shoals Light** (37°08.9'N., 76°38.2'W.), Mile 16.9E, 34 feet above the water, is shown from a pile with a black and white diamond-shaped daymark, in depths of 2 feet. A seasonal fog signal is at the light.

(51) **Skiffes Creek,** Mile 17.8E, has a private channel at the entrance leading to an army pier and turning basin, and to a small-boat basin to the northward. The channel is marked by lighted and unlighted buoys, lights, a directional light, and daybeacons. In February-April 1994, the controlling depths were 20 feet in the entrance channel and 19 to 20 feet in the basin except for lesser depths along the south and east edges of the basin south of the army pier, thence 20 feet alongside the pier on both sides; thence in 1982, 12 to 18 feet in the small-boat basin except for shoaling near the north limit.

(52) A **restricted area** is at the entrance to the Skiffes Creek channel. (See **334.280,** chapter 2, for limits and regulations.)

(53) A privately marked barge channel with a reported depth of 12 feet in 1978 leads to the Surry Nuclear Power Plant on the west side of James River opposite Skiffes Creek. The nuclear powerplant is operated by the Virginia Electric and Power Co. A 120-foot-high nuclear reactor tower at the station is prominent from all directions on the river.

(54) **College Creek,** Mile 22.5N, has depths of 1 foot across the flats at the mouth, 4 feet inside for 2 miles, thence 2 feet for 0.5 mile to **Williamsburg Landing,** 1 mile from the town of **Williamsburg.** The creek is difficult to navigate without local knowledge. Fixed bridges across the creek at the mouth and about 4 miles above the mouth have clearances of 10 and 12 feet, respectively. Private aids mark the creek.

(55) **Cobham Bay,** a wide bight at Mile 25.6S, has general depths of 5 to 7 feet.

(56) **Jamestown Island,** at Mile 26N, is the site of historic **Jamestown,** which was settled by Capt. John Smith and his 105 cavaliers in 1607. The town is on **Church Point,** Mile 28N, the northwest end of the island. The Jamestown white monument is prominent; the ruins of the old church are hidden by trees.

(57) **The Thorofare, Back River,** and **Sandy Bay** separate Jamestown Island from the mainland and form a small-craft passage that connects at each end with James River. The Thorofare is a shallow bay on the northeast side of the island. Back River is a narrow, winding channel that extends from the head of The Thorofare along the north side of the island to Sandy Bay, which opens into the James River. A narrow channel marked by daybeacons leads through the extensive mudflats in the upper part of The Thorofare. The controlling depths are about 2 feet through The Thorofare, thence 4 feet through Back River and Sandy Bay to the highway bridge that crosses its mouth, and thence 2 feet across the bar to deep water in James River. In 1971, extensive shoaling was reported on the bar. The highway bridge across the mouth of Sandy Bay has a 48-foot fixed span with a clearance of 12 feet. A small island about 200 yards northeastward of the bridge should be left to northward. An overhead power cable near the west end of Back River has a reported clearance of 30 feet.

(58) **Mill Creek,** which empties into The Thorofare from the northward, has a depth of 1 foot at the entrance and 2 or more feet to a landing 1.5 miles above the mouth. Above the landing, the creek is foul with snags and obstructions. The fixed highway bridge across the mouth of the creek has a clearance of 10 feet.

(59) **Powhatan Creek,** used by fishermen and small pleasure craft during the summer, empties from the northward into Sandy Bay. The mouth of the creek is about 0.3 mile above the highway bridge that crosses the mouth of Sandy Bay. The bridge has a width of 48 feet and a clearance of 12 feet. In April 1970, depths of 4 feet were reported at the mouth of the creek, thence 6 feet to a marina near the highway bridge about 0.4 mile above the mouth. The fixed bridge has a width of 25 feet and a clearance of 12 feet. A current is reported noticeable at both bridges. Gasoline, water, some marine supplies, and a 17-ton lift are available at the ma-

rina; minor hull and engine repairs can be made. The numerous snags along the banks of the creek can be avoided by staying in midstream, and the island 0.3 mile above the mouth should be left to the northward.

(60) The approach to Powhatan Creek through Sandy Bay is marked by daybeacons and uncharted stakes, but local knowledge is required to carry the best water. In July 1984, severe shoaling was reported in the channel through the basin.

(61) **Chart 12251.–Scotland** (37°11.0'N., 76°47.2'W.), Mile 27.5S, is the mainland terminus of the Jamestown Ferry, which operates to **Glass House Point,** 1 mile northwest of the monument at Jamestown, across the river. Ferry slip depths are about 18 feet on the Scotland side and about 20 feet on the Jamestown side. The piers at Scotland and Glass House Point extend channelward over 700 feet and about 1,600 feet, respectively; the slips are marked by lights and a fog signal. The partly submerged remains of the old Scotland wharf are about 100 yards southeast of the slips.

(62) **Grays Creek,** Mile 28.2S, is entered through a shallow bay. A 3-foot channel leads to deeper water inside. There are many snags and obstructions in the creek. A marina is 1 mile above the mouth.

(63) **Chickahominy River,** Mile 33N, has a controlling depth of 6 feet in the entrance channel, thence 10 feet or more to the head of tidewater navigation at Walkers Dam 19 miles above the mouth. The lock in the dam has a length of 60 feet, a width of 15 feet, and a depth of 4 feet over the sill. The lock gates are hand operated; there is no tender. It is recommended that at least two strong persons be on board before attempting to use the lock. Obstruction lights mark the dam spillway.

(64) The seasonally buoyed channel through the broad flats at the entrance to Chickahominy River is entered 0.7 mile westward of Glass House Point; daybeacons and seasonal buoys mark the critical points inside. The river is used by fishermen and pleasure boatmen. The mean range of tide is 1.9 feet at the entrance.

(65) Wharf ruins extend out about 200 yards from shore 0.5 mile above **Barrets Point,** on the east side of the entrance. A sunken barge lies on the eastern edge of the channel 0.8 mile above the point.

(66) **Barrets Ferry** highway bridge, 1.3 miles above the mouth, has a swing span with a clearance of 12 feet. (See **117.1 through 117.59 and 117.1003,** chapter 2, for drawbridge regulations.) A pier with a depth of 7 feet at the face extends 100 yards into the river from the east bank just north of the bridge.

(67) **Wright Island Landing,** on the east side of Chickahominy River 6.5 miles above the mouth and **Shipyard Landing** on the same side of the river about 500 yards above Wright Island Landing, were in 1997, reported to be in ruins. The buildings at the wharf on Wright Island Landing are prominent from downstream. A marina at **Brickyard Landing**, on the north side of the river about 2.5 miles above Wright Island Landing can provide berths, gasoline, water, food, ice, pumpout station, with hull and engine repairs available.

(68) The Thorofare is an unmarked cut leading through the bend of the river 10 miles above the mouth; the controlling depth is 5 feet. Small boats able to pass through the cut can save 1.2 miles.

(69) A small marina on the west side 11 miles above the mouth, just north of **Mt. Airy,** has a depth of 9 feet at the face. Gasoline and some supplies are available.

(70) **Lanexa,** on the east side 15 miles above the mouth, has a marina with reported depths of 10 feet alongside. Gasoline and supplies are available. Hull and engine repairs can be made; a 70-foot marine railway and a 10-ton mobile lift are at the marina.

(71) The former ferry slip and piers at **Claremont,** Mile 37.5S, are in ruins, and the bottom area to the southeastward near **Sloop Point** (37°13.8'N., 76°57.0'W.) is foul. The former ferry slip across the river at **Sandy Point** is also in ruins.

(72) **Upper Chippokes Creek,** Mile 38.5S, has depths of about 5 feet for 3 miles, thence 2 feet for 1 mile to the head of navigation. The channel into the creek is close along the south bank. An overhead power cable about 3.5 miles above the mouth has a clearance of 56 feet. A wreck, marked by a light, is off the creek entrance close to the southwest side of James River main channel; the wreck extends about 2 feet above high water.

(73) **Brandon** wharf, Mile 39.3W, is a private landing with depths of 20 feet alongside.

(74) **Sturgeon Point,** Mile 42.5N, is the site of an abandoned brickyard.

(75) **Wards Creek** empties into James River at Mile 46S. A depth of 2 feet can be carried across the mudflats at the entrance by following the east bank at a distance of about 75 yards. Above the mouth, depths are 4 to 10 feet for 1.7 miles. The creek is an excellent storm anchorage for any boat able to enter.

(76) **Fort Powhatan** (37°16.2'N., 77° 04.6'W.) is at Mile 46.8S.

(77) **Ruffins Wharf,** Mile 48.2E, has depths of about 16 feet at the face.

(78) An overhead power cable, with a clearance of 180 feet at the main channel, crosses the river at **Windmill Point,** Mile 49.9S.

(79) **Willcox Wharf,** Mile 50N, is in poor condition. The far end of the pier is in ruins.

(80) **Powell Creek,** Mile 53S, has depths of 7 feet through a narrow channel across the mudflats at the entrance and for 2 miles upstream. The creek is a good storm anchorage.

(81) A highway lift bridge with a clearance of 50 feet down and 145 feet up crosses the James River at **Jordan Point,** Mile 56.4S. The bridgetender monitors VHF-FM channel 13; call sign KQ-7167. (See **117.1 through 117.49,** chapter 2, for drawbridge regulations.) Effective August 31, 1978, the Captain of the Port, Hampton Roads, directed that the bridge be closed to all vessels with a vertical height in excess of 45 feet from 8 p.m. until 6 a.m. nightly.

(82) **Jordan Point Marina,** on the east side of Jordan Point at the south end of the bridge, may be reached through a channel marked by private piles. Berths, gasoline, diesel fuel, water, electricity, and some marine supplies are available.

(83) **Chart 12252.–Hopewell,** Mile 59W, is the site of several industries and the terminus of a branch railroad to Petersburg. Allied-Signal, Hopewell Plant Pier (37°18'28"N., 77°15'55"W.), about 0.8 mile southeastward of **City Point,** is 622 feet long with berthing on both north and south sides and has 25 feet reported alongside. The pier is used for receipt of phenol, sulphur, oleum, and fuel oil for plant consumption and shipment of dry bulk ammonium sulfate.

(84) Regional Enterprises, Hopewell Wharf (37°18'46"N., 77°16'11"W.), has a 90-foot face with 300 feet of berthing space and 23 feet alongside. The wharf receives crude oil, petroleum products and fertilizer.

(85) Tidewater Materials, Hopewell Concrete Plant Wharf (37°18'49"N., 77°16'16"W.) has a 400-foot face with 400 feet of berthing space and 10-18 feet alongside. The wharf receives sand and gravel.

(86) **Appomattox River,** Mile 59.5W, leads to a small-boat harbor on the east side, about 7.5 miles above the entrance, and to the city of Petersburg, about 10 mile above the mouth. In September-October 1987, the midchannel controlling depth was 7½ feet to the small-boat harbor; thence in June 1992-February 1993, 8½ feet at midchannel to about 200 yards below the I-95 Richmond-Petersburg Turnpike Bridge. The channel through the flats at the mouth is marked by a buoy, lights, and daybeacons.

(87) The highway bridge, 1.1 miles above the mouth of Appomattox River, has fixed spans with a clearance of 40 feet. The Hopewell Yacht Club, on the south side 0.2 mile west of the bridge, has a small-boat basin with depths of about 6 feet off the T-pier. Gasoline, diesel fuel, and some supplies are available. Hull, engine, and radio repairs can be made; marine railway, 60 feet, mobile hoist, 50 tons.

(88) The railroad bridge, 2.4 miles above the mouth, has a swing span with a clearance of 10 feet. (See **117.1 through 117.59 and 117.995,** chapter 2, for drawbridge regulations.) An overhead power cable 0.8 mile above the bridge has a clearance of 113 feet.

(89) A fixed highway bridge with a clearance of 40 feet is about 3.1 miles above the mouth.

(90) At the small-boat harbor, 7.5 miles above the entrance of Appomattox River, some supplies and berths are available; gasoline and diesel fuel can be obtained by truck. Repairs can be made; marine railway to 100 feet.

(91) The I-95 Richmond-Petersburg Turnpike Bridge, 8.0 miles above the mouth, has a fixed span with a clearance of 40 feet.

(92) The channel in Appomattox River is blocked at Petersburg by a dam. A diversion channel joins the river below the dam with the river above the dam. Their lower junction is about 2.9 miles below the dam; the upper junction is immediately above the dam. An overhead power cable 0.2 mile below the dam has a clearance of 51 feet.

(93) **Petersburg,** about 10 miles above the mouth of Appomattox River, is an important rail center. The bulkheads at the city are in poor condition. Fuel and supplies are not available at the waterfront, but all kinds of small-craft supplies may be obtained in the city.

(94) Above its junction with Appomattox River, James River becomes narrow and winding. The bends are often referred to as the Curles of the River, and the 14-mile section from Hopewell to Wilton has been called The Corkscrew.

(95) **Turkey Island Bend,** 2 miles north of Hopewell, has depths of 10 to 30 feet around its 6-mile length, but is seldom used except by pleasure boats because the main channel now leads northwestward through Turkey Island Cutoff; most of the landings along the bend are in ruins. The north and west sections of the bend afford excellent anchorages, because the river current has been greatly diminished by the cutoff and winds from any direction have little effect; the bottom is mostly soft mud.

(96) **Turkey Island Cutoff,** Mile 61, is 1 mile long and well marked by lights.

(97) **Cable ferry.**–A cable ferry crosses the lower part of Turkey Island Cutoff at Mile 61.1, providing vehicular access to Turkey Island, which is a National Wildlife Refuge. The single cable is moored ashore at both sides; when the self-propelled barge is underway, the cable is picked up to the deck level of the barge, which is about 3 feet above the water, and then dropped astern. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(98) An overhead power cable with a reported clearance of 171 feet crosses the river at Mile 62.3.

(99) **Jones Neck Cutoff,** Mile 64, extends about 1 mile northward and westward; the cutoff is well marked by lights. The old river bend around **Jones Neck** has depths of 13 to 44 feet along its 4.5-mile length, but is now little used; most of the landings are in ruins.

(100) **Dutch Gap,** Mile 66.5, the first canal dug in the United States, was cut through in 1611. The main channel extends west-northwestward through **Dutch Gap Cutoff (Aiken Swamp-Dutch Gap Cutoff),** which is about a mile long and is marked by lights at both ends. There is a gravel basin in **Hatcher Island,** on the north side of the cutoff.

(101) The old river bend around Hatcher Island has depths of 7 to 25 feet along its 2-mile length. **Richmond Yacht Basin,** north of Hatcher Island, has piers with depths of about 12 feet at their outer ends. The preferred passage is east of Hatcher Island. In 1980, it was reported that the passage west of Hatcher Island required local knowledge. A small marine railway at the yacht club can handle boats up to 40 feet for repairs; gasoline is available. A fixed highway bridge over the western entrance to the bend has a width of 40 feet and a clearance of 21 feet.

(102) The old channel southward from Dutch Gap has depths of 9 feet or more for over 1 mile to the gravel basin in **Farrar Island.**

(103) A concrete-and-steel wharf of the Virginia Electric and Power Co. (37°22'57"N., 77°22'44"W.), at Mile 67.5S, has main channel depths at the face. A privately maintained light is shown from the end of the wharf. The overhead cable just above the wharf has a clearance of 165 feet. About 300 yards westward is another cable with a clearance of 166 feet.

(104) A small-boat basin is at Mile 68.6N. In June 1980, depths of 6 feet were reported in the basin. Berths, gasoline, and limited supplies are available. Repairs can be made; marine railway, 45 feet. A chemical plant pier at Mile 71.3S has depths of 20 feet alongside.

(105) The oil wharf at **Drewrys Bluff,** Mile 71.7W, has 350 feet of berthing space with dolphins and main channel depths at the face. Vessels are requested to reduce speed when passing the wharf.

(106) **Falling Creek** (37°26.2'N., 77°25.7'W.) enters James River at Mile 72.4W. In January 1999, a fixed highway bridge was under construction with a design clearance of 145 feet about 0.35 mile NE of Falling Creek.

(107) **Richmond,** the capital of Virginia, is at Mile 78E. Traffic to and from the city consists chiefly of petroleum products, sand and gravel, general cargo, and tobacco. Commercial navigation in the river proper ends at the city wharves, but small boats can go 1 mile farther. The turnpike fixed highway bridge just below **Mayos Island** has a clearance of 40 feet.

(108) **Weather.**–Richmond's climate might be classified as modified continental. Summers are warm and humid and winters generally mild. The mountains to the west act as a partial barrier to outbreaks of cold, continental air in winter, the coldest air being delayed long enough to be modified, then further warmed as

it subsides in its approach to Richmond. The open waters of the Chesapeake Bay and Atlantic Ocean contribute to the humid summers and mild winters. The coldest weather normally occurs in late December and in January, when low temperatures usually average in the upper twenties (-2.7° to 1.5°C) and the high temperatures in the upper forties (8.3° to 9.5°C). Temperatures seldom lower to zero (-17.8°C). The average annual temperature for Richmond is 58.5°F (14.7°C) with an average high of 68.8°F (20.4°C) and an average low of 47.6°F (8.7°C). July is the warmest month with an average temperature of 78.4°F (25.8°C) and January is the coolest month with an average temperature of 38°F (3.3°C). The warmest temperature on record at Richmond is 105°F (40.6°C) recorded last in July 1977 while the coldest temperature is -8°F (-22.2°C) recorded in February 1979. Each month, June through September has recorded temperatures in excess of 100°F (37.8°C) while each month, October through May has seen temperatures below freezing (0°C).

(109) Precipitation is rather uniformly distributed throughout the year with a slight maximum during July and August. However, dry periods lasting several weeks do occur, especially in autumn when long periods of pleasant, mild weather are most common. There is considerable variability in total monthly amounts from year to year so that no one month can be depended upon to be normal. The average annual precipitation totals 42.8 inches (1087 mm). July is the wettest month averaging 5.16 inches (131.1 mm) and February the driest, averaging just under 3 inches (76.2 mm). Snow has been recorded during 7 of the 12 months, October through April. Snowfalls of 4 inches (101.6 mm) or more occur on an average of once a year. Snow usually remains on the ground only 1 or 2 days at a time. Average annual snowfall is 13 inches (330.2 mm). The greatest 24-hour snowfall, 13.3 inches (337.8 mm) occurred on two occasions; January 1980 and February 1983. Ice storms (freezing rain or glaze) are not uncommon in winter, but they are seldom severe enough to do any considerable damage. The James River reaches tidewater at Richmond where flooding has occurred in every month of the year, most frequently in March (28 times in the past 61 years), and only twice in July. Hurricanes and less severe storms of tropical origin have been responsible for most of the flooding during the summer and early fall. Damaging storms occur mainly from snow and freezing rain in winter and from hurricanes, tornadoes, and severe thunderstorms at other seasons. Damage may be from wind, flooding, or rain, or from any combination of these. (See page T-8 for **Richmond climatological table**.)

(110) Since 1950, nine tropical storms have directly influenced the Richmond area. The most noteworthy was the remnants of hurricane Hazel in 1954. Hazel quickly became a destructive cold-core low after coming ashore north of Myrtle Beach, South Carolina and was still packing winds of greater that 70 miles per hour (61 knots) by the time it approached Richmond. At this time it was moving northward at speeds greater than 50 miles per hour (43 knots).

(111) The National Weather Service maintains an office at Byrd Field; **barometers** can be compared there or checked by telephone.

(112) **Towage**.–Tug service is available at Richmond to assist in docking and undocking, if desired.

(113) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(114) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(115) Richmond-Petersburg is a **customs port of entry.**

(116) The Port of Richmond's **harbormaster** maintains an office at the Department of Public Works, City of Richmond, 800 E. Broad Street, Richmond, VA 23219. He is responsible within the port for the assignment of berths and anchorages.

(117) **Wharves.–**City-owned facilities at the Port of Richmond have turning basins and are served by railway tracks and highways; water is available. The alongside depths given are reported. (For the latest controlling depths, contact the operator.)

(118) **Port of Richmond, Deepwater Terminal** (37°27'22"N., 77°25'14"W.): 1,584-foot face, 25 feet alongside; deck height, 24½ feet; livestock loading facility; 300,000 square feet covered storage; 39 acres open storage; three crawler cranes to 350-ton capacity; receipt and shipment of conventional and containerized general cargo including tobacco, forest, paper products, chemicals, and cocoa; shipment of scrap iron and livestock; operated by Federal Marine Terminals, Inc. In 1996, a submerged obstruction was reported close to James River Light 168 in about 37°29.4'N., 77°25.3'W., just below the bend in the river at Goode Creek.

(119) There are eight oil barge wharves and two barge wharves that handle gravel and construction material at Richmond. Most are on the west bank between Falling Creek and across from Richmond Upper Marine Terminal.

(120) **Supplies.–**Gasoline and diesel fuel are available by tank truck. Some marine supplies may be obtained in Richmond, but major supplies must be obtained in the Hampton Roads area.

(121) **Repairs.–**There are no drydocking or major repair facilities in the Port of Richmond; the nearest such facilities are in the Hampton Roads area.

(122) The **Kanawha Ship Canal,** at the north end of the Richmond waterfront, is reached through a masonry lock with a length of 156 feet, a width of 35 feet, and a vertical lift of 23 feet; the lock is operated by hand from 0800 to 1600, Monday through Friday. A 24-hour advance notice to the Port of Richmond harbormaster is required. The canal is said to have depths of about 12 feet, but is now little used except by small private boats. The railroad bridge about 150 yards above the lock has a 30-foot bascule span with a clearance of about 2 feet. The bridge no longer opens for the passage of vessels.